

Appln No. 10/646,064  
Amdt date October 28, 2004  
Reply to Office action of May 28, 2004

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. Cancelled
2. (Currently Amended) A shoulder joint prosthesis in accordance with claim ~~1~~ 19, wherein the coupling for the connection of the shaft (13) includes a clamping section (15) with which a firm clamping seat of the coupling (15) in the shaft (13) can be established by introducing into a coupling mount of the shaft (13), in particular a clamping seat which can be released again.
3. (Previously Presented) A shoulder joint prosthesis in accordance with claim 2, wherein the clamping section (15) tapers like a cone and can be introduced into a correspondingly shaped counter shape of the shaft (13) as a coupling mount.
4. (Previously Presented) A shoulder joint prosthesis in accordance with claim 2, wherein the clamping section (15) forms a shape matched connection with the counter shape which is rotationally fixed with respect to a longitudinal axis and is wedged by its conical shape in the state connected to the shaft (13).
5. (Previously Presented) A shoulder joint prosthesis in accordance with claim 2, wherein the clamping section (15) has a cross-section deviating from a circular shape.

Appln No. 10/646,064  
Amdt date October 28, 2004  
Reply to Office action of May 28, 2004

6. (Previously Presented) A shoulder joint prosthesis in accordance with claim 2, wherein the clamping section (15) has an elliptical cross-section.

7. (Previously Presented) A shoulder joint prosthesis in accordance with claim 6, wherein the elliptical cross-section of the clamping section (15) and of the counter shape of the shaft (13) is aligned in its plane such that the major axis of the ellipse appears as a perpendicular in a projection toward lateral.

8. (Previously Presented) A shoulder joint prosthesis in accordance with claim 6, wherein the shaft (13) has, in the plane of the elliptical cross section, the outline of a rectangle provided with rounded corners whose long sides extend parallel to the major axis of the ellipse.

9.-13. Cancelled.

14. (Currently Amended) A shoulder joint prosthesis in accordance with claim 4 19, wherein the support member (21) is replaceably connected to the bearing body (11).

15. (Currently Amended) A shoulder joint prosthesis ~~in accordance with claim 1~~, comprising two cooperating bearing bodies (11), a shaft (13) and a coupling (15) for the connection of the shaft (13) to one of the bearing bodies (11), wherein a support member (21) adjoins a lower side (19) of the bearing body (11) connectable to the shaft (13), an outer support surface (23) of said support member (21) at least partly filling

Appln No. 10/646,064

Amdt date October 28, 2004

Reply to Office action of May 28, 2004

a gap present between the bearing body (11) and the shaft (13) in the state connected to the shaft (13) such that the growing together of bone fragments is promoted; and

wherein, when the bearing body (11) is connected to the shaft (13), at least one recess (31) is present between the shaft (13) and the support member (21) at which a tool can be positioned to release the bearing body (11) from the shaft (13).

16. Cancelled.

17. (Currently Amended) A shoulder joint prosthesis in accordance with claim ~~16~~ 19, wherein the support element (27) is fixedly connected to the shaft (13) and is in particular welded to the shaft.

18. (Currently Amended) A shoulder joint prosthesis in accordance with claim ~~16~~ 19, wherein the support element (27) is made in one piece with the shaft (13).

19. (Currently Amended) A shoulder joint prosthesis ~~in accordance with claim 16~~ comprising two cooperating bearing bodies (11), a shaft (13) and a coupling (15) for the connection of the shaft (13) to one of the bearing bodies (11), wherein a support member (21) adjoins a lower side (19) of the bearing body (11) connectable to the shaft (13), an outer support surface (23) of said support member (21) at least partly filling a gap present between the bearing body (11) and the shaft (13) in the state connected to the shaft (13) such that the growing together of bone fragments is promoted;

Appln No. 10/646,064

Amdt date October 28, 2004

Reply to Office action of May 28, 2004

wherein the shaft (13) is provided with a support element (27), having a basket-like or quiver-like shape, which is mounted laterally at the shaft (13) and whose outer side forms a jacket surface of the shaft (13) merging into the support surface (23) of the support member (21) in the region of the transition from the shaft (13) into the support member (21); and

wherein the support element (27) is provided with apertures (29).

20. (Previously Presented) A shoulder joint prosthesis in accordance with claim 19, wherein the proportion of the sections of the outer surface of the support element (27) interrupted due to the apertures (29) lies in the range from 35% to 45% along a peripheral line (141) of the support element (27) which lies in the implanted state in a plane extending perpendicular to the shaft axis (143) and, in the proximal direction, at a spacing of 8 mm from the point of intersection (145) between the shaft axis (143) and the head axis or shell axis (147).

21. (Currently Amended) A shoulder joint prosthesis ~~in accordance with claim 16,~~ comprising two cooperating bearing bodies (11), a shaft (13) and a coupling (15) for the connection of the shaft (13) to one of the bearing bodies (11), wherein a support member (21) adjoins a lower side (19) of the bearing body (11) connectable to the shaft (13), an outer support surface (23) of said support member (21) at least partly filling a gap present between the bearing body (11) and the shaft (13)

Appln No. 10/646,064

Amdt date October 28, 2004

Reply to Office action of May 28, 2004

in the state connected to the shaft (13) such that the growing together of bone fragments is promoted;

wherein the shaft (13) is provided with a support element (27), having a basket-like or quiver-like shape, which is mounted laterally at the shaft (13) and whose outer side forms a jacket surface of the shaft (13) merging into the support surface (23) of the support member (21) in the region of the transition from the shaft (13) into the support member (21); and

wherein, with respect to the orientation of the support element (27) in the implanted state with the shaft axis (143) extending perpendicular to the transverse plane, the ratio  $X/Y$  of the maximum outer diameter of the support element (27) in the sagittal direction  $X$  and the maximum outer diameter of the support element (27) in the transverse direction  $Y$  lies in the range from 0.85 to 0.95.